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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/820,473	04/07/2004	Yu-Pin Kuo	251806-1050	7554
24504	7590	08/09/2007		
THOMAS, KAYDEN, HORSTEMEYER & RISLEY, LLP			EXAMINER	
100 GALLERIA PARKWAY, NW			WELLS, KENNETH B	
STE 1750				
ATLANTA, GA 30339-5948			ART UNIT	PAPER NUMBER
			2816	
			MAIL DATE	DELIVERY MODE
			08/09/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/820,473	Applicant(s) KUO ET AL
	Examiner Kenneth B. Wells	Art Unit 2816

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 07 April 2004.
- 2a) This action is **FINAL**. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-17 is/are pending in the application.
 - 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-17 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 07 April 2004 is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>4/7/04</u> . | 6) <input type="checkbox"/> Other: _____ |

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1. Claims 2, 7, 9 and 12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 2, it is misdescriptive, and therefore indefinite, to recite that the phase error judgment unit is reset according to the first reset signal because no embodiment is seen in any of the drawing figures (or supported by the specification) where the first reset signal is used for restting both the phase error detector and also the phase error judgment unit. Note the same problem in claim 12.

In claim 7, there is no antecedent basis for reciting third and fourth flip-flops (because claim 7 goes back to claim 1 which does not set forth any first and second flip-flops). Note the same problem in claim 9.

2. The drawings are objected to under 37 CFR 1.83(a).

The drawings must show every feature of the invention specified in the claims. Therefore, the limitations of claim 16 must be shown or the feature canceled from the claim. No new matter should be entered.

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Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

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3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 4 and 5 are rejected under 35 U.S.C. 102(e) as being anticipated by Yoo.

Note Fig. 5, where the recited phase error detector is all of the circuitry shown, except for circuit 140 which is formed by a phase error judgment unit (the combination of elements 141, 142 and 144) and a reset unit (the combination of elements 143 and 145). The functional limitations in claims 4 and 5 are deemed to be inherent during operation of the Yoo Fig. 5 circuitry.

4. Claims 1-10 are rejected under 35 U.S.C. 102(e) as being anticipated by Chou et al.

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Note Fig. 5, where the recited phase error detector is circuit 400, the phase error judgment unit is the combination of elements 411 and 412 and the reset unit is the combination of elements 414 and 415. The functional limitations in claims 4 and 5 are deemed to be inherent during operation of the Chou et al Fig. 5 circuitry. The first and second reset signals are INTL1 and INTL2, respectively.

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 11-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chou et al.

The use of the Chou et al phase detecting circuitry in a PLL, though not disclosed, nevertheless would have been obvious to any person having ordinary skill in the art who will easily recognize that the phase detecting circuitry of Chou et al can also be used in a PLL circuit (due to the well-known similarity between DLL and PLL circuits) the

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motivation being to obtain the benefits/advantages of the Chou et al circuitry. The use of a quantizer in such a PLL circuit also would have been obvious because such is a well-known element in PLL circuits for receiving the up/down outputs from a phase detector, of which fact official notice is taken by the examiner.

6. Claims 11 and 14-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yoo.

The use of the Yoo phase detecting circuitry in a PLL, though not disclosed, nevertheless would have been obvious to any person having ordinary skill in the art who will easily recognize that the phase detecting circuitry of Yoo can also be used in a PLL circuit (due to the well-known similarity between DLL and PLL circuits), the motivation being to obtain the benefits/advantages of the Yoo circuitry. The use of a quantizer in such a PLL circuit also would have been obvious because such is a well-known element in PLL circuits for receiving the up/down outputs from a phase detector, of which fact official notice is taken by the examiner.

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7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Note Fig. 2 of Katayama et al and Fig. 1A of Lo, each of which is also seen to anticipate at least independent claim 1.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kenneth B. Wells whose telephone number is (571)272-1757. The examiner can normally be reached on Monday through Friday from 8:30am to 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Drew N. Richards, can be reached at (571)272-1736. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair->

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direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Kenneth B. Wells
Kenneth B. Wells
Primary Examiner
Art Unit 2816

August 3, 2007